

Quiz 1 Study Guide

Key Terms:

- Lab safety – **Do's and Don't** and why.
- Variables
 1. Independent
 2. Dependent
 3. Constant
 4. Control
- The **Scientific Method** – Know how scientific investigation is undertaken. Think about it as a process – much like getting ready for school in the morning. You don't put your shoes on before you take a shower. Nor do you put your back pack on before your shirt. When doing these questions understanding the process will be as useful as memorizing terms.
- **The Hypothesis**
- **Scientific Theory**
- **Scientific Law**
- **Precision vs. Accuracy** – critical to science. Remember accuracy one is on target. It is the correct answer – what we want. Precision is a measure of our ability to get the same result (correct or wrong) over and over and over again.
- **Scientific Bias**
 - Measurement Bias
 - Sampling Bias – know how to tell these apart – keep in mind that there is often a lot of overlap
 - Unrepresentative
 - Too small as sample size
 - Non-random sampling

You must be able to:

Define the terms but also identify them in real life examples of how they are used or portrayed in science. For example, in the case studies we looked at on high school smoking, none of those studies specifically listed which was the independent or dependent variable; however, from your **deep understanding** of the terms you could **determine** which was which. Be prepared to do so during this quiz and the rest of the year in Earth Sciences.

Use what you know to think critically.